

REMARKS

This amendment is being filed in response to the Office Action having a mailing date of May 18, 2006. Claims 15-18 and 21-30 are presented for examination, of which claims 21-30 are newly added. Claims 1-14 and 19-20 have been cancelled herein without prejudice. No new matter has been added.

Overview:

In the Office Action mailed May 18, 2006, certain claims were rejected under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) over various cited references. Moreover, certain claims were provisionally rejected on the basis of obviousness-type double patenting in view of certain co-pending applications and some of the cited references.

Claims 1-14 and 19-20 have been cancelled herein without prejudice, thereby making the rejections of these claims moot. Claim 15 has been rewritten in independent form. With respect to rejection of claims 15-18, the applicants respectfully disagree with the basis of the rejections and request reconsideration and further examination of the pending claims.

35 U.S.C. § 103(a) rejections of the claims on the basis of the two Uno references and Sakue:

Claims 1-4, 15-16, and 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,449,239 ("Uno et al. '239"). Claims 1-4, 15-16, and 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Uno et al. WO 02/29787 ("Uno et al. WO 02/29787") and U.S. Patent Publication No. 2002/0168587 ("Sakaue et al."). The Applicants respectfully disagree with the basis of the rejections.

Uno et al. '239 describes an optical recording medium with a substrate 100, a first medium 101, a separating layer 109, and a second medium 201 that are laminated sequentially on the substrate 100 as shown in Figure 8. The first medium 101 includes a first protective layer 102, a first interface layer 103, a recording layer 104, a second interface layer 105, a second protective layer 106, a reflective layer 107, and a thermal diffusion layer 108. The second medium 201 contains similar layers. (*See, e.g.,* column 11, lines 28-45 of Uno et al. '239).

The interface layer contains a material that prevents atomic diffusion between the recording layer and the protective layer. (*See, e.g.*, column 7, lines 42-45; and column 8, lines 21-23 of Uno et al. '239). The interface layer preferably consists of materials that contain nitride, oxide nitride, oxide, carbide, or fluoride as the main component. In some cases, sulfide or selenide may be mixed. (*See, e.g.*, column 8, lines 23-34 of Uno et al. '239).

Uno et al. '239 does not disclose, teach, or suggest the optical recording medium as set forth in the claims. For example, newly independent claim 15 is directed to an optical recording medium including two or more recording layers spaced apart from each other and dielectric layers each formed in a vicinity of one the recording layers, at least one of said dielectric layers that is formed in a vicinity of one of the recording layer that closest to a light incidence plane containing an oxide as a primary component and nitrogen as an additive.

Uno et al. '239, as discussed above, fails to disclose, teach, or suggest the optical recording medium in claim 15. Instead, Uno et al. '239 describes using nitride, oxide nitride, oxide, carbide, or fluoride as the main component of an interface layer, such as layer 103. Uno et al. '239 does not disclose, teach or suggest using an oxide as the primary component and nitrogen as an additive. Although using an oxide is among the possible materials for the use of the main component of the interface layer, Uno et al. '239 does not disclose, teach, or suggest using an oxide as the primary component and nitrogen as an additive.

In view of the foregoing, the applicants respectfully submit that claim 15 is allowable over Uno et al. '239. Claims 16-18 and 21-30 depend from claim 15, and are allowable over Uno et al. '239 for the features recited therein as well as by virtue of their dependency on claim 15.

With regards to the rejections on the basis of Uno et al. WO 02/29787 (corresponding to U.S. Patent Publication No. 2004/0013069, hereinafter "Uno et al. '069") and Sakaue et al., the Applicants respectfully disagree with the basis of the rejections.

Uno et al. '069 describes an optical medium with interface layers 4 and 6 as shown in Figure 1. (*See, e.g.*, paragraph [0049] of Uno et al. '069). Interface layers 4 and 6 may be formed of a material as that prevents the recording layer 5 from being oxidized, corroded, deformed or the like. (*See, e.g.*, paragraph [0048] of Uno et al. '069). Examples of usable

materials as a main component for the interface layers 4 and 5 include nitrides, such as Ge-N, Ge-Si-N, and Si-N; nitride-oxides, such as Ge-O-N, Ta-O-N, and Zr-O-N; oxides, such as Si-O, Al-O, and Ti-O; carbides, such as Ge-C, Cr-C, and Si-C; fluorides, such as Si-F, Al-F, and Ca-F. (See, e.g., paragraph '069 [0049] of Uno et al. '069). Preferably, nitride or nitride-oxides are used as the main component.

Uno et al. '069 does not disclose, teach or suggest the optical recording medium as set forth in the claims. For example, newly independent claim 15, as discussed above, is directed to an optical recording medium including two or more recording layers spaced apart from each other and dielectric layers each formed in a vicinity of one the recording layers, at least one of said dielectric layers that is formed in a vicinity of one of the recording layers that is closest to a light incidence plane containing an oxide as a primary component and nitrogen as an additive.

Uno et al. '069 fails to disclose, teach or suggest the features recited in claim 15. Although oxides are among the list of possible materials to be used as the main component of the interface layers 4 and 5 of Uno et al. '069, he does not disclose, teach or suggest using an oxide as a primary component and nitrogen as an additive. Moreover, Uno et al. '069 (as well as the other cited references) do not disclose teach or suggest the "dielectric layers that is formed in a vicinity of one of the recording layers that is closest to a light incidence plane" as containing the recited oxide and nitrogen.

Similarly, Sakaue et al. describes a phase change optical disk on a transparent substrate with a recording layer, a reflective layer, and a dielectric layer arranged between the recording layer and the reflective layer, wherein the main component of the dielectric layer is an oxide or a nitrooxide of Tantalum (Ta). (See, e.g., paragraph [0035] of Sakaue et al.). Preferably, a second dielectric layer having its main component as an oxide, nitride, or nitrooxide of Ta is used. (See, e.g., paragraph [0037] of Sakaue et al.). Other configurations of materials for the dielectric layer disclosed in Sakaue et al. include at least one selected from SiO₂, Al₂O₃, GeN, Si₃N₄, Al₃N₄, GeON, SiON, and AlON in the oxide of the Ta or nitrooxide of Ta are possible. (See, e.g., paragraph [0068] of Sakaue et al.).

Sakaue et al. does not disclose, teach, or suggest an optical recording medium as set forth in the claims and/or further does not cure the deficiencies of Uno '069. For example, newly independent claim 15, as discussed above, a dielectric layer "containing an oxide as a primary component and nitrogen as an additive." Although Sakaue et al. uses an oxide or a nitrooxide of Ta as the main component of the dielectric layer, Sakaue et al. fail to disclose, teaches or suggest using nitrogen as an additive.

For the forgoing reasons, the Applicants therefore respectfully submit that claim 15 is allowable over Uno et al. '069 whether singly or in combination with Sakaue et al. Claims 16-18 and 21-30 that depend from claim 15 and are allowable for the features recited therein as well as by virtue of their dependency on claim 15. For example, new claims 21-30 contain recitations that are not disclosed, taught, or suggested by any of the cited references, whether singly or in combination.

35 U.S.C. § 103(a) rejections of the claims on the basis of the two Inoue references and other references:

In the Office Action, claims 1-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2004/0052194 ("Inoue et al. '194") in view of Sakaue et al. or Uno et al. '239. Further, claims 1-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2004/0004932 ("Inoue et al. '932") in view of Sakaue et al. or Uno et al. '239. For the reasons set forth below, it is kindly requested that these rejections be withdrawn. Specifically, Inoue et al. '194 and Inoue et al. '932 do not qualify as prior art.

The applicants respectfully point out that Inoue et al. '194 was filed in the U.S. on July 3, 2003, and Inoue et al. '932 was filed in the U.S. on July 1, 2003.

The applicants further point out that the present application was filed in the U.S. on October 14, 2003 and claimed priority to Japanese Patent Application No. 2002-307369 filed on October 22, 2002, and further claimed priority to Japanese Patent Application No. 2003-005635 filed on January 14, 2003. These October 22, 2002 and January 14, 2003 foreign priority dates precede the July 3, 2003 U.S. filing date of Inoue et al. '194 and the July 1, 2003

U.S. filing date of Inoue et al. '932. In accordance with established U.S. patent law and U.S. Patent Office practice, the foreign filing dates of Inoue et al. '194 and Inoue et al. '932 are irrelevant for purposes of using these documents as references. Therefore, Inoue et al. '194 and Inoue et al. '932 do not qualify as prior art under 35 U.S.C. § 103(a) or other provision.

The English-language translations of the priority Japanese Patent Application Nos. 2002-307369 and 2003-005635, as well as the requisite signed statement by a translator conversant in the English and Japanese languages, will be filed in due course subsequent to filing of this amendment. The certified copies (Japanese language) of these priority applications were previously filed in on October 14, 2003 and are therefore present in the file wrapper of the present application. Since Inoue et al. '194 and Inoue et al. '932 do not therefore qualify as prior art, it is kindly requested that the grounds for rejections on the basis of these references be withdrawn.

Provisional Double Patenting Rejections:

Claims 1-20 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-30 of co-pending Application No. 10/748979 (U.S. 2004/0152016). Claims 1-20 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-24 of co-pending Application No. 10/717831 (U.S. 2004/0110086). Claims 1-20 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-19 of co-pending Application No. 10/818,324 (U.S. 2004/0202097). Claims 1-20 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-24 of co-pending Application No. 10/808628 (U.S. 2004/0191685).

Claims 1-20 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-19 of co-pending Application No. 10/764,805 (U.S. 2004/0157158). Claims 1-20 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-26 of co-pending Application No. 10/613525 (U.S. 2004/0052194). Claims 1-20 were provisionally rejected under the judicially created doctrine of obviousness-type double

patenting as being unpatentable over Claims 1-26 of co-pending Application No. 10/612,615 (U.S. 2004/0004932).

As noted by the Examiner, a terminal disclaimer may be used to overcome a provisional rejection based on a non-statutory obviousness-type double patenting. The applicants will consider filing a terminal disclaimer in the present application if one or more of these co-pending applications issue before the present application, and if the present application is still pending at that point. Otherwise, it is respectfully submitted that since none of these other co-pending applications has yet issued, the present application can be passed into allowance and issued without the filing of a terminal disclaimer. A terminal disclaimer may then be filed, if appropriate, in one or more of these other co-pending applications, based on the issuance of the present application.

Accordingly, it is kindly requested that the provisional obviousness-type double patenting rejection be withdrawn, and that the pending claims be allowed. The Examiner is kindly requested to telephone the undersigned attorney, if any of the co-pending applications have issued prior to the present application, so that the applicants may file a terminal disclaimer if appropriate to expedite prosecution.

Further, it is respectfully submitted that the obviousness-type double patenting rejections are moot in view of the recitations in newly independent claim 15 and in view of the newly added claims. Accordingly for the various reasons set forth above, it is kindly requested that the obviousness-type double patenting rejections be withdrawn.

Supplemental Information Disclosure Statement (IDS):

A Supplemental IDS, form PTO-1449 having the references listed thereon, copies of the non-English language references (if applicable), and the requisite fee (if applicable) are being filed with this amendment. The Examiner is kindly requested to return an initialed copy of the form PTO-1449 along with the next communication, so as to confirm that the references have been considered and made of record.

Conclusion:

Overall, none of the references singly or in any motivated combination disclose, teach, or suggest what is recited in the independent claims. Thus, given the above amendments and accompanying remarks, the independent claims are now in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim.

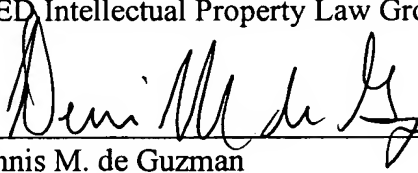
If the undersigned attorney has overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (206) 622-4900.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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